

BiH Economic Update

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BiH Economic Update – Table of Contents

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Preface

This update summarizes key economic indicators and for the Bosnian economy and their trends. Special sections are also included that present new economic indicators, explore prospects for economic growth, and review the statistical history of BiH and other topics.

In most cases, indicators are given for the Federation and Republika Srpska separately. The Entities' Institutes for Statistics descend from a common Yugoslav-era statistical system and probably continue to follow similar methodologies in the collection and construction of most indicators. It is not yet possible to provide statistics on the BiH economy as a whole except in cases where Entity statistical quantities can simply be added together. The newly-established State-level BiH Agency for Statistics is charged with producing economic data for BiH as a whole and thus dealing with cases where simple addition I

s not possible. No data has yet been produced by this Agency.

It is well known that economic data produced by the entity Statistical Institutes suffer from several problems that are common to transition economies. Real-sector data underreport the size and growth of the economy due to the lack of data on the "shadow economy." Price statistics use outdated aggregation weights and tend to overstate inflation. Economic statistics are gathered through universal reporting by formal-sector entities rather than through random sampling of the entire economy. Labor market statistics poorly measure actual employment and unemployment levels due to a large degree of "underemployment" in the formal economy and unmeasured employment in the shadow economy. These and other problems will be corrected over time as BiH Institutes for Statistics improve their methodologies and as reform initiatives reduce incentives for firms to operate in the shadow economy. Until that time, however, official BiH statistics should be used with caution and interpreted carefully.

It is important to note that most of the growth rates shown in this update are annualized growth rates that are calculated by comparing the value of an indicator in a month or quarter to its value in the month or quarter of the previous year. Annualized growth rates are one way of removing seasonal fluctuations and showing the longer-run trend in a variable. The few exceptions in which non-annualized growth rates are shown will be noted.

I. National Income and Economic Activity

Table 1- BiH GDP

	1990	1995	1996	1997	1998 ^a
GDP (million KM)		2,873	4,189	5,803	7,292
Nominal GDP per capita ^b	4,025	798	1,164	1,612	2,025
% change on preceding year			46%	39%	26%

a : Preliminary estimate.

b: Calculated using population estimate of 3,600,000 people.

Source: WB Economic Brief (Nov.18 1998); Federation and RS Institutes for Statistics.

Nominal BiH GDP grew 46% percent in 1996 and 39% in 1997 according to data of the Federation and RS Institutes of Statistics. Preliminary estimates suggest that GDP grew by 26% in 1998. A GDP deflator or retail price index for BiH as a whole is not yet available.

Official estimates of GDP are known to under-represent the true level of economic activity because of the large size of the “shadow economy” in BiH. It is also not clear to what extent the entity Institutes for Statistics use different methodologies in estimating national income, and the Federation Institute for Statistics continues to experience problems in collecting economic data for the entire territory. GDP growth is also probably underestimated by the official data, because the private sector has grown faster than the state sector and yet is in the “shadow economy” to a greater degree.

Table 2 - Federation GDP

	1995	1996	1997	1998 ^a
Nominal GDP (million KM)	1,962	3,049	4,189	5,348
Nominal GDP per capita ^b	892	1,386	1,904	2,431
% change on preceding year		55%	37%	28%
Price inflation ^c		-20%	9%	6%
Real GDP per capita (1995 prices)	892	1,733	2,183	2,663
% change on preceding year		75%	28%	22%
<i>Structure of GDP (sector as % of total GDP):</i>				
Industry and mining, crafts	23%	22%	29%	n.a.
Agriculture and fishing	22%	15%	11%	n.a.
Forestry	1%	2%	1%	n.a.
Construction	4%	4%	10%	n.a.
Transport and communications	6%	7%	6%	n.a.
Services	45%	52%	44%	n.a.
-Wholesale and retail trade	25%	20%	16%	n.a.
-Catering and tourism	2%	3%	2%	n.a.
-Public services ^d	11%	20%	18%	n.a.
-Banking and insurance	2%	3%	3%	n.a.
-Other services	4%	5%	4%	n.a.

a : Preliminary estimate of the Federation Institute for Statistics.

b: Calculated using population estimate of 2,200,000 people.

c : Average of retail price and cost-of-living inflation rates.

d : Health, education, communal services, water management, and government services.

Source: World Bank and Federation Institute of Statistics

Nominal GDP growth in the Federation slowed from 55% in 1996 to 37% in 1997 and 28% (estimated) in 1998. No GDP deflator is provided by the Federation Institute of Statistics. Real GDP growth is calculated here using the average of retail price and cost-of-living inflation to deflate nominal GDP growth. This estimate of real growth shows a sharper slowdown than nominal growth.

The structure of Federation GDP reveals that there has been considerable structural change in the Federation economy from 1995 to 1997. The shares of agriculture and trade have declined, and the shares of industry and construction have risen. The share of the service sector has hovered at just under half of the economy; although the share of the trade sector has declined, this has been offset by a rise in the share of public services.

Table 3 – Republika Srpska GDP

	1995	1996	1997	1998^a
Nominal GDP (million KM)	911	1,140	1.614	1.944
Nominal GDP per capita ^b	651	814	1,153	1,389
% change on preceding year		25%	42%	20%
<i>Structure of GDP (sector as % of total GDP):</i>				
Industry and mining, crafts	32%	28%	22%	n.a.
Agriculture and fishing	29%	28%	29%	n.a.
Forestry	1%	4%	4%	n.a.
Construction	2%	4%	5%	n.a.
Transport and communications	6%	6%	6%	n.a.
Services	30%	30%	34%	n.a.
-Wholesale and retail trade	7%	8%	10%	n.a.
-Catering and tourism	2%	2%	n.a.	n.a.
-Public services (health, education, communal services, water management, and government)	16%	15%	n.a.	n.a.
-Banking and insurance	5%	5%	6%	n.a.
-Other services	-	-	-	-

a : World Bank estimate.

b: Calculated using population estimate of 1,400,000 people.

Source: World Bank and RS Institute of Statistics

Growth of nominal GDP of 42% in 1997 was higher than the 1996 rate of 25%, but in 1998 growth slowed to 20%. GDP per capita in the RS was on average 40% less than in the Federation during 1995-1998. The (relatively) low growth rate in 1996 was largely due to lack of foreign aid inflows. RS national income dynamics are also affected by the close ties of this economy to the economy of FRY. It is not yet possible to construct a real GDP measure for the RS due to incomplete data on price inflation and exchange rates.

Data on the sectoral distribution of GDP shows that the structure of the RS economy differs substantially from that of the Federation, which is to be expected given the RS's much lower income level. Agriculture has a higher share and services a lower share in the RS than in the

Federation. However, the very low share of the trade sector in the RS is implausible, and a more accurate accounting would show a higher share for services.

The Federation and Republika Srpska Economic Activity Indicators

Although data are provided on national income on an annual basis, neither entity Statistical Institute provides quarterly or monthly indicators on national income. As a result, most analysts use the index of industrial production to evaluate monthly growth of entity economies. This approach suffers from the drawback that the industrial sector only accounts for a small portion of the entity economies. The tables presented above show that industry and mining accounted for only 29% of Federation GDP and 22% of RS GDP in 1997. The service sector has a large weight in the Federation, and services and agriculture in the RS.

Entity Institutes for Statistics publish monthly data on production or sales for the industrial, agricultural, construction, transport and communication, and forestry sectors; quarterly data is available for the domestic (wholesale and retail) trade and restaurant/hotel sectors. Monthly and quarterly growth rates of these indicators are aggregated using annual sectoral GDP weights to derive the “economic activity indicator.” This indicator is not a proxy for growth in national income, because it measures growth in output/sales, not value-added. However, it is more useful as an indicator of economic activity than the industrial production index alone because it encompasses several sectors of economic activity. Appendix A at the end of this bulletin describes in detail the methodology used to derive the economic activity indicator for the Federation and the RS. For both the Federation and the RS, the monthly and quarterly activity indicators differ because the latter includes the domestic trade and restaurant/hotel sectors but the former does not.

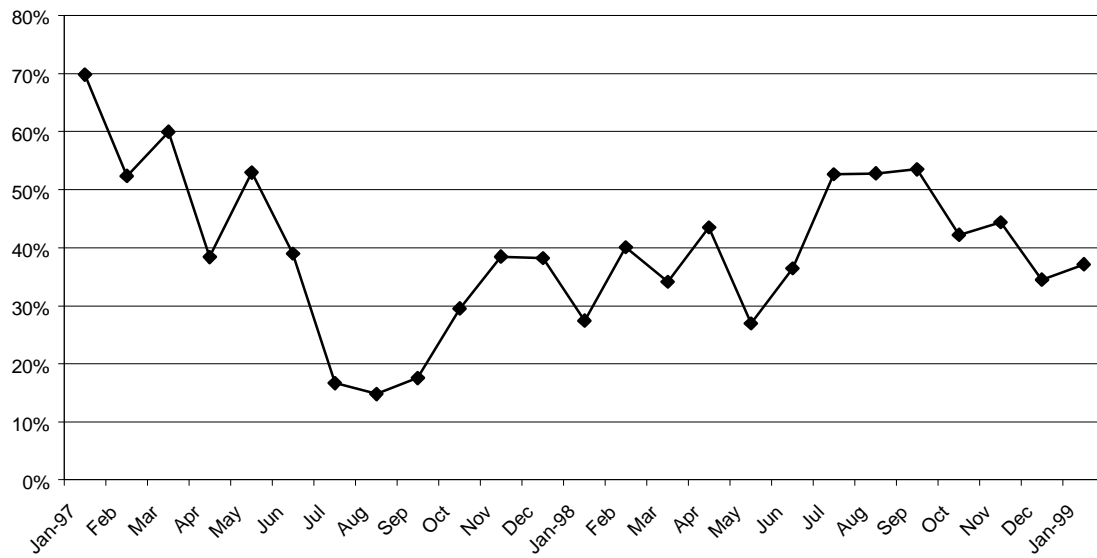
Federation Activity Indicator

The figures below show annualized monthly and quarterly growth rates for the Federation activity indicator during 1997 and 1998. Growth was very strong in the first half of 1997 but fell sharply in mid-1997. A recovery ensued, and growth reached another peak in the third quarter of 1998. Since then, growth has declined from above an annualized rate of 50% to below 40%.

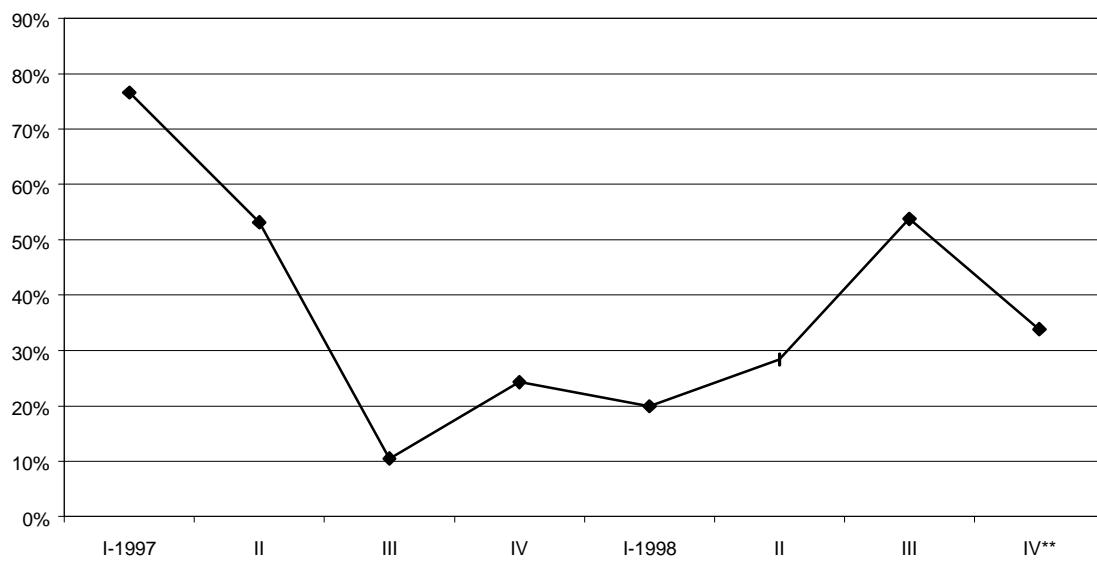
Republika Srpska Activity Indicator

No data on sectoral activity in 1996 has yet been obtained for the RS, so activity indicator annualized growth rates can only be calculated for 1998. The figures below show that growth in the RS ran strong through the third quarter of 1998: although there was a mild fall from the second to third quarter, there is no important trend evident yet in activity indicator growth.

**Federation Activity Indicator:
Annualized Monthly Growth**



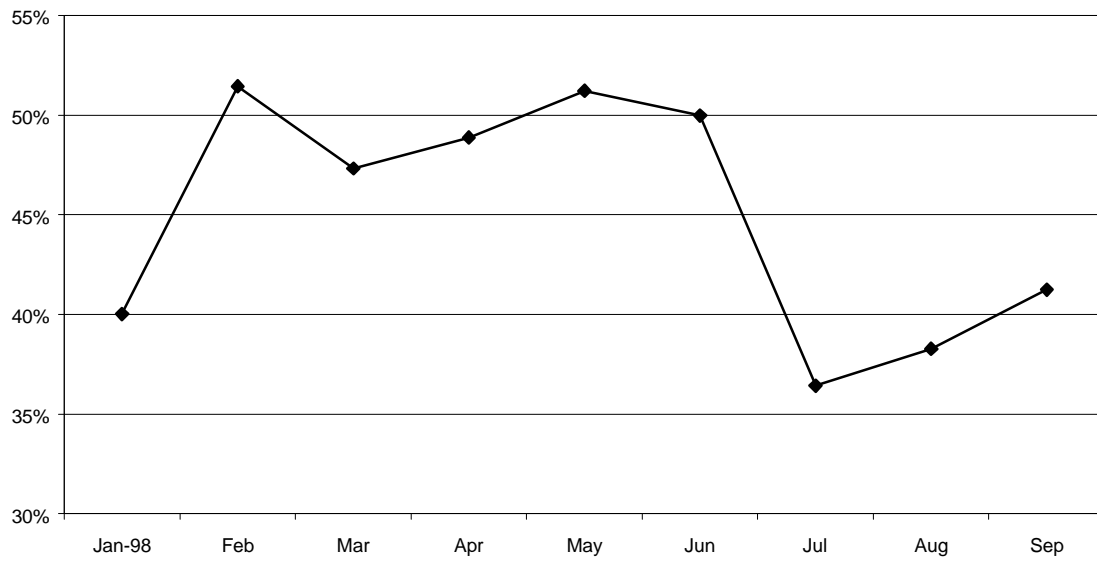
**Federation Activity Indicator:
Annualized Quarterly Growth**



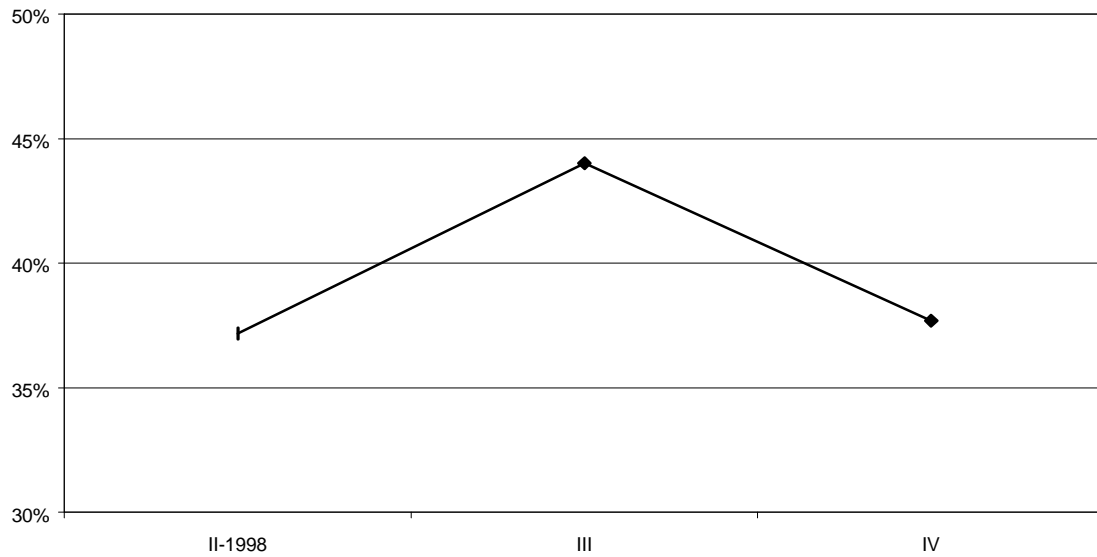
** : Trade and hotel/restaurant sectors not included in growth calculation.

Source: Calculated from data of the Federation Institute for Statistics

**Republika Srpska Activity Indicator:
Annualized Monthly Growth**



**Republika Srpska Activity Indicator:
Annualized Quarterly Growth**



Source: Calculated from data of the RS Institute for Statistics

Recovery to the Pre-War Level of Income

Growth in the BiH economy is already slowing substantially. The extraordinary growth rate experienced by the Federation economy in 1996 fell dramatically in 1997 and again in 1998. Although the RS experienced higher growth in 1997 than 1996, growth is expected to fall significantly in 1998. This growth slowdown is taking place even though the BiH economy is still far below its pre-war level of national income: per-capita GDP in 1998 was roughly one-half the level of 1990. How long will it take for BiH to return to the pre-war income level?

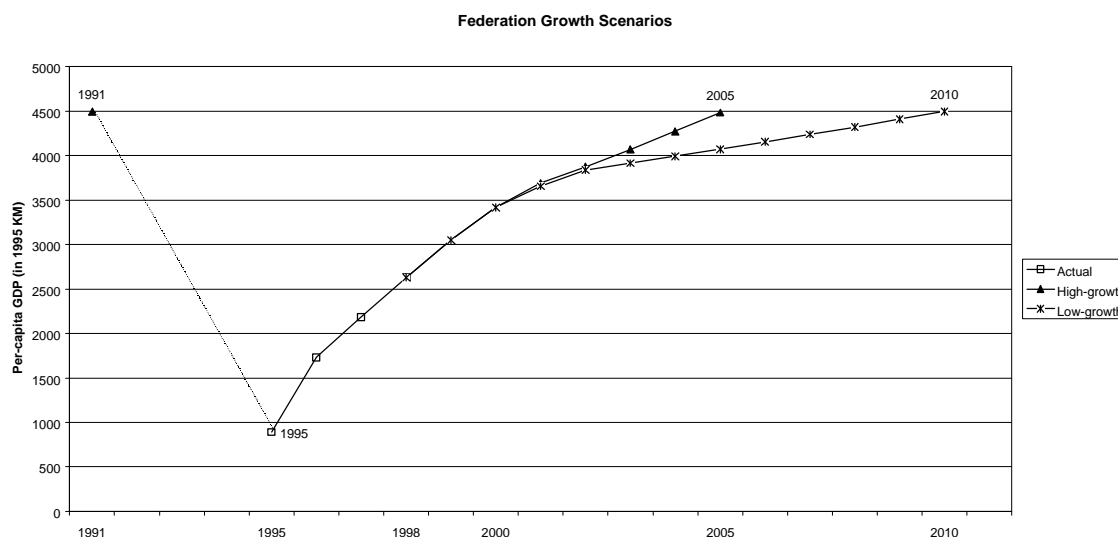
We consider here the Federation economy due to difficulties in calculating real income growth for BiH as a whole. Real per-capita Federation GDP is estimated to have grown by 22% in 1998.

Continued large-scale donor assistance in 1999 suggests that a real growth rate of 16% is not implausible. After 1999, decline in aid inflows will have a negative impact on economic growth.

Two scenarios are considered here: an optimistic high-growth scenario in which reform and restructuring initiatives are pursued aggressively and the economy enjoys 5% growth in the long run, and a pessimistic low-growth scenario in which long-run growth is 2%. The table below outlines the scenarios' assumptions and shows the year by which the Federation economy will attain its pre-war income level under each scenario, and the figure displays these results graphically. Under the high-growth scenario, the economy will take 10 years (1995-2005) to return to the pre-war level; under the low-growth scenario, 15 years will be required.

Table 4 – Economic Recovery Scenarios

	Assumed real per-capita growth rate in:						Pre-war level attained by:
	1999	2000	2001	2002	2003	Long-run	
High-growth	16%	12%	8%	5%	5%	5%	2005
Low-growth	16%	12%	7%	5%	2%	2%	2010



Similar results are likely to hold for the RS. Recovery to the pre-war level will thus require a

decade under the optimistic scenario and could realistically require 15 years. Analysis of BiH growth prospects must also take into account the fact that rapid economic growth has been hard to come by in European transition economies: among these, only Poland has had sustained real growth at 5% or higher over several years. BiH governments must make more serious commitments to economic reform and restructuring if there is to be any hope of returning to the pre-war income level within a decade or so of the end of the war.

Electricity Consumption and the Shadow Economy

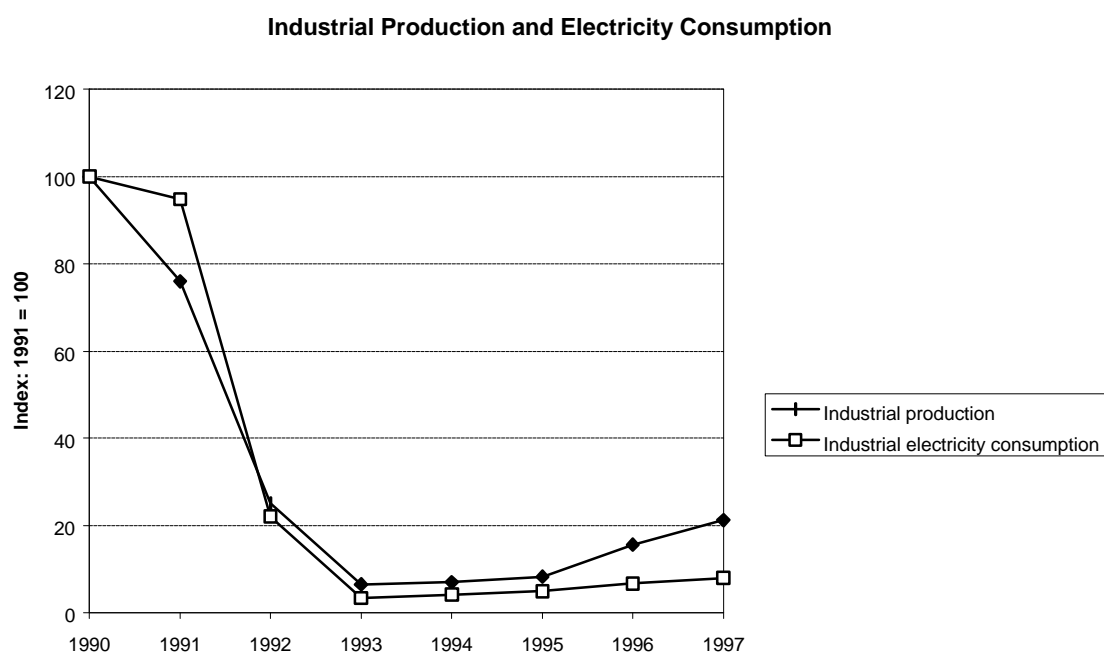
It is well known that official statistics for transition economies such as that of BiH understate the true level of national income and other important measures of economic activity. This is due in particular to a sharp rise in the size of the “shadow,” or unmeasured, economy as official controls and monitoring mechanisms are relaxed and the incentives to engage in tax evasion increase. Some analysts have noticed that for economies such as Russia, the consumption of electricity by the industrial sector fell by much less than industrial production in the 1990s, leading them to conclude that actual change in industrial production is better measured by change in electricity consumption rather than official statistics on production.

The same approach can be applied to BiH. The table below shows percentage change in official industrial production and industrial electricity consumption in the Federation during 1991-97, and the figure shows indices of these indicators. These data do not suggest that there is a sizable “shadow economy” in the industrial sector in the Federation. During the war, official production and electricity consumption fell to almost exactly the same degree. More importantly, during the recovery period 1995-97, official production rose more than twice as much as electricity consumption.

If the electricity approach to measuring the shadow economy is valid, then the shadow economy in BiH must be located in other sectors of activity. Trade is the obvious candidate. Unfortunately, it is not yet possible to employ alternative approaches to measuring the size of the shadow economy in BiH. The main alternative to the electricity approach is to use household budget survey data to re-estimate household consumption, but no household survey has been carried out in BiH since 1987.

Table 5 – Industrial Production and Electricity Consumption

Growth in :	1991	1992	1993	1994	1995	1996	1997	1995-97
Industrial production	-24%	-67%	-74%	8%	18%	88%	36%	202%
Industrial electricity consumption	-5%	-77%	-85%	23%	19%	36%	20%	94%



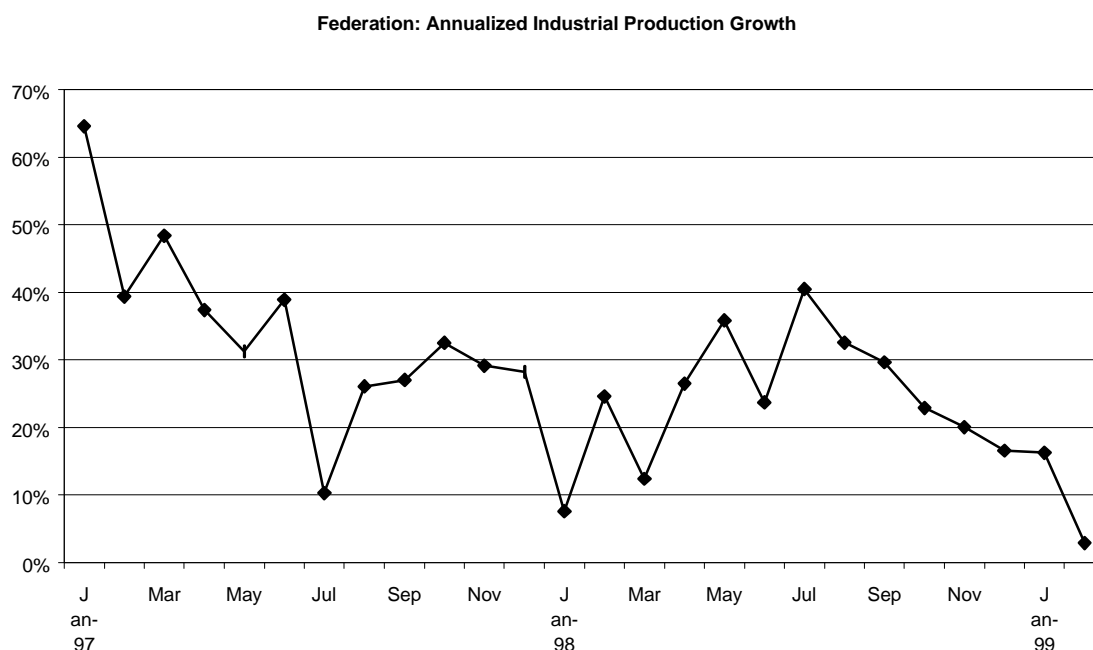
Note: Data for 1990-91 cover all of BiH but for 1992-97 cover only the Federation.

Source: Federation Institute for Statistics

II. Sectoral Growth

Industrial Production Growth : Federation

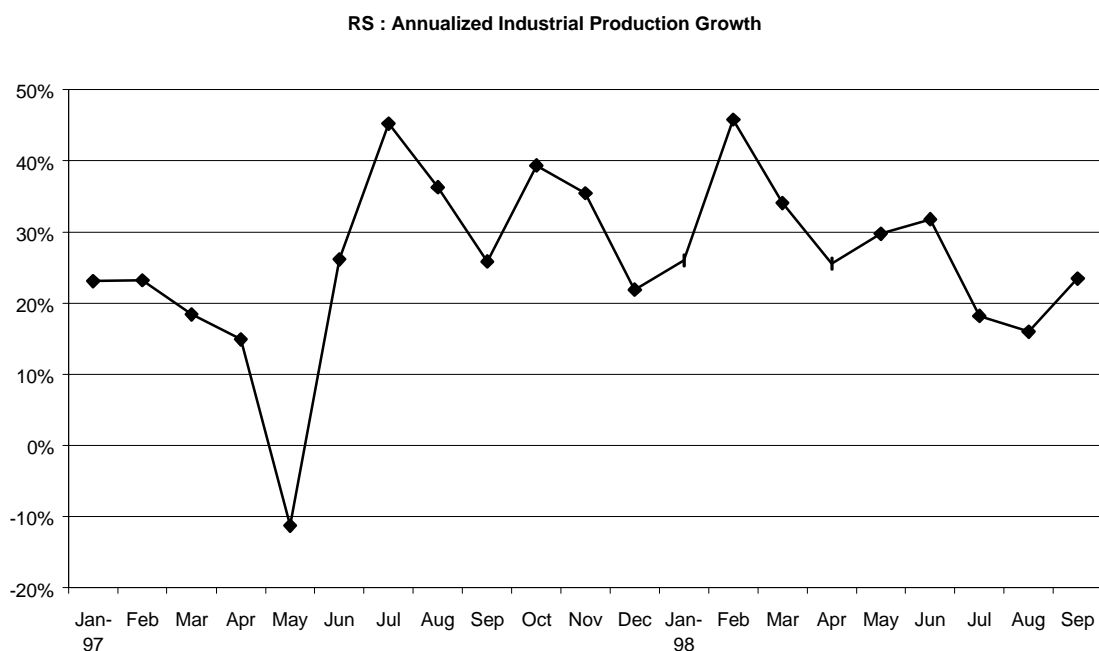
Industrial production grew by 88% in 1996, 36% in 1997, and 24% in 1998. The figure below shows the annualized growth rates of industrial production during 1997 and 1998. The high growth rates of over 30% that were the norm in 1997 were usually not experienced in 1998. It is already evident that growth in industrial production due to recovery from the war has diminished substantially, even though the level of production by end-1998 was still far below its level in 1991.



Source: Federal Institute of Statistics

Industrial Production Growth : Republika Srpska

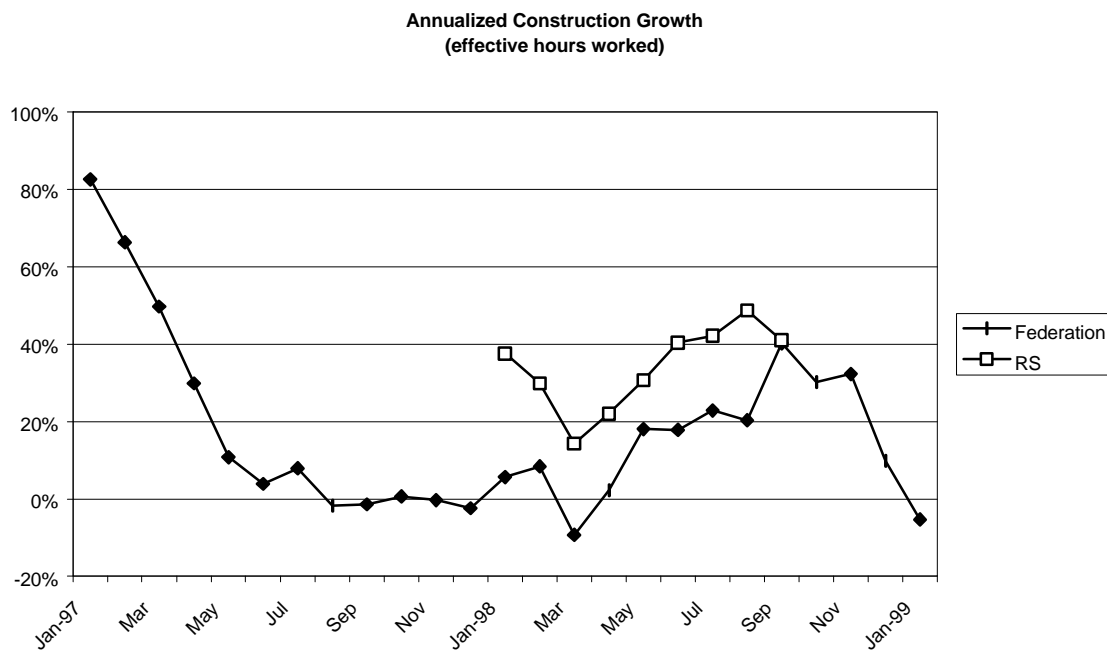
Industrial production rose by 26% in 1997 in the RS. The figure below shows that annualized growth rates fluctuated sharply from June 1997 to September 1998. Annualized growth in the third quarter of 1998 was significantly less than in previous months, suggesting that a downward trend in growth may be setting in, but it is too early to identify any trend with confidence. Given increasing levels of foreign aid to the RS, this drop in growth in the third quarter is perhaps surprising.



Source: RS Institute of Statistics

Construction Growth

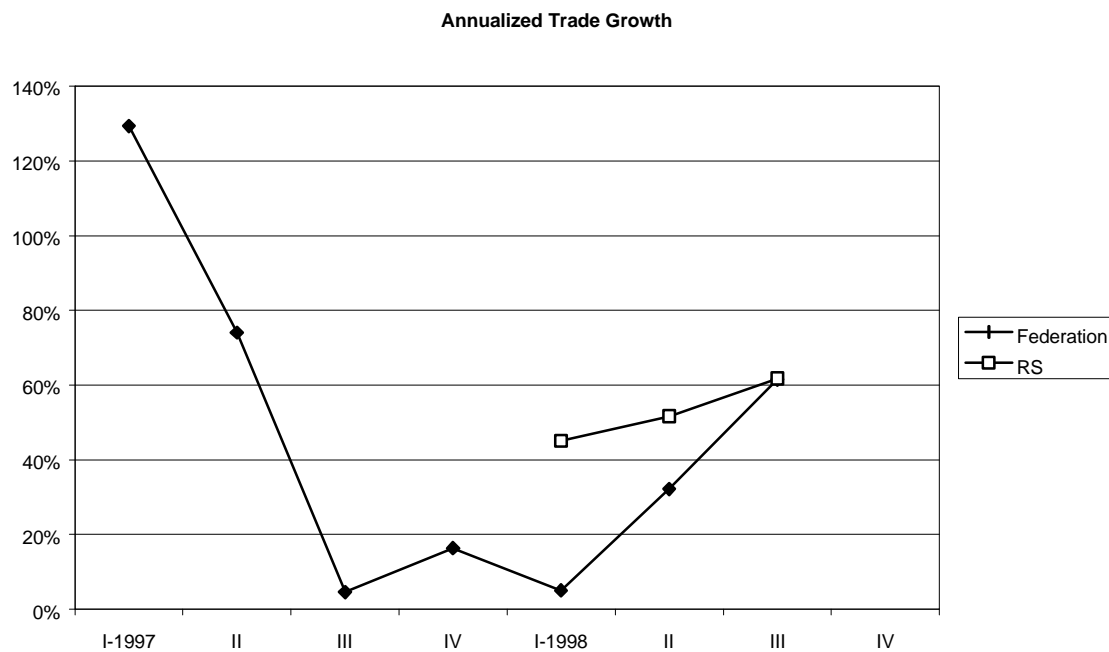
Construction growth as measured by growth in effective hours worked on construction sites was very high in early 1997 in the Federation but fell sharply to a level of roughly zero growth in the second half of that year. Growth picked up in 1998 but was slightly negative in January 1999. In the RS, construction growth ran at a high annualized rate during the first nine months of 1998.



Source: Federation and RS Institutes for Statistics

Domestic Trade Growth

Annualized growth in the real value of wholesale and retail trade turnover ran at a very high value in the Federation in early 1997 but fell dramatically in the second half of that year. Growth recovered in 1998. In the RS, growth in real trade turnover ran at a high annualized rate during the first three quarters of 1998.



Source: Federation and RS Institutes for Statistics

III. Foreign Trade

Table 6 - BiH and Entity Trade Flows

(million KM)	Imports				Exports		
Area:	BiH	Federation	CAFAO	RS	BiH	Fed.	RS
Source:	DOTS ^a	Official	CAFAO	Residual ^b	DOTS ^a	Official	Residual ^b
1997 I-VI	1,975	1,332	1,315	661	265	74	191
VII-XII	2,147	1,386	1,608	539	384	117	267
1998 I-VI	2,010	822	1,502	508	405	107	298
VII-XII	-	1,266	2,013	-	-	215	-
1997	4,122	2,718	2,923	1,199	650	191	459
1998	-	2,088	3,515	-	-	321	-
Growth, 1997-98	-	-23%	20%	-	-	69%	-
Percentage of GDP:							
1997	71%	65%	70%	74%	11%	5%	28%
1998	-	39%	66%	-	-	6%	-

a : DOTS US dollar values converted using period average DM-US\$ exchange rate.

b : DOTS value for BiH as a whole minus Federation-CAFAO (imports) or Federation-official (exports) value.

Source: Federation Institute for Statistics; CAFAO; IMF Direction of Trade Statistics (DOTS).

Accurate measurement of BiH trade flows has been one of the most difficult areas of BiH statistics. The RS still does not publish official data on trade flows, and the Federation experienced serious difficulties in collecting data on imports in 1998. There are several sources of data on trade flows, including official Federation Institute for Statistics data, CAFAO data, and IMF Direction of Trade Statistics (DOTS) data. Official Institute for Statistics data are based on reports from custom houses in the case of imports and from enterprises in the case of exports.

CAFAO estimates the value of trade flows using data on receipts of the 1% customs evidencing charge – their data is a very useful check on the official data. The IMF uses trade reports from BiH's trading partners to estimate imports and exports.

The table above shows that in 1997, official and CAFAO data on Federation imports were very close, but in 1998, official imports were substantially less than CAFAO's estimate. This is because several customs houses ceased reporting data on imports to the Institute for Statistics in 1998. CAFAO is thus the reliable source on Federation imports in 1998.

It is possible to estimate the value of RS imports and exports as the difference between the DOTS values for imports and exports of BiH as a whole and Federation imports and exports. This "residual" approach to estimating RS trade flows is of course subject to some uncertainty, but at present it is the only way to obtain such data.

Imports were a very high percentage of GDP in both the Federation and RS in 1997 (70% and 74% respectively). Imports grew by 20% in the Federation in 1998. Exports were only 6% of GDP in the Federation in 1998. The huge BiH trade deficits are of course financed by international aid. Interestingly, estimated exports as a percentage of GDP for the RS, 28% in 1997, were much higher than in the Federation. This could reflect the fact that the RS has had much less access to foreign financing of budgetary imbalances than the Federation. It could also

reflect the fact that official data underestimates the true value of Federation exports, so that the residual approach overestimates the value of RS exports.

The ongoing dramatic events in the region will have major impacts on RS trade flows. Trade with FRY will be disrupted, and foreign financing of RS economic imbalances may be lower than expected. The RS will have difficulty reorienting its trade flows to alternative partners in the short run, but the disruption of trade with FRY and increasing internal macroeconomic imbalances in FRY will probably stimulate the RS to begin doing this.

Table 7 - BiH Trading Partners (million of KM)

	Exports				Imports			
	1997		1998 I-II		1997		1998 I-II	
Total	647	100%	404	100%	4122	100%	2010	100%
Transition Europe	300	46%	184	45%	2225	54%	1098	55%
Croatia	215	33%	110	27%	1238	30%	587	29%
Hungary	3	1%	0	0%	208	5%	121	6%
Slovenia	47	7%	38	9%	550	13%	265	13%
Other	35	5%	36	9%	229	6%	125	6%
Industrial countries	312	48%	201	50%	1890	46%	906	45%
USA	14	2%	7	2%	196	5%	23	1%
Austria	16	2%	9	2%	161	4%	90	4%
Germany	109	17%	67	17%	609	15%	307	15%
Italy	139	21%	87	21%	522	13%	235	12%
Netherlands	9	1%	4	1%	108	3%	61	3%
Other	26	4%	27	7%	295	7%	190	9%
Other countries	35	5%	20	5%	7	0%	5	0%

Source: IMF Direction of Trade Statistics (DOTS); US dollar values converted into KM values using US\$-DM commercial exchange rates taken from IMF International Financial Statistics.

BiH's major trading partners are countries of ex-Yugoslavia (Croatia and Slovenia) and central Europe (Germany and Italy). The continued large share of trade with countries of ex-Yugoslavia suggest that improvement in the regional environment for trade and production is going to be important for BiH's economic recovery.

IV. Population and Employment

Population

Table 8 - Households and Population According to Censuses and Estimates for 1996

Year	Households	Population	Size of Household	Age Structure		
				0-14	15-64	65 & more
1971	848,545	3,746,111	4.41	34%	61%	5%
1981	1,030,689	4,124,256	4.00	27%	66%	6%
1991	1,207,693	4,377,033	3.62	23%	68%	9%
1996	1,078,898	3,645,199	3.38	-	-	-
-RS	410,173	1,391,593	3.39	-	-	-
-Fed	668,725	2,253,606	3.37	-	-	-

Source: BiH Censuses, 1971-1991; estimate for 1996.

The war's dramatic effect on BiH population is evident in the data above. Population is estimated to have fallen by roughly 17% from 1991 to 1996. BiH household size also fell during the war, from 3.62 in 1991 to 3.38 in 1996. The fall in this period was unusually high: during the war, household size fell by 1.4% per year on average, whereas during 1971-91, it fell by 1.0%. The average size of household in 1996 was the same for the two Entities. The age structure of the BiH population shifted towards the elderly prior to the war: 5 percent were above 65 in 1971 but 9 percent in 1991. This trend may have been exacerbated by the war due to the exodus of young people abroad.

Table 9 - Estimated Population in 1997: Original Residents and Displaced Persons

	Residents	Displaced persons	Total
BiH	2,897,248	1,009,022	3,906,270
Federation	1,869,987	570,565	2,440,552
RS	1,027,261	438,457	1,465,718

Source: UNHCR

According to UNHCR data, 26% of BiH's population were displaced persons in 1997. The RS had a higher proportion of displaced persons (30%) than the Federation (23%).

Employment

Federation

Table 10 – Federation Employment and Unemployment

	1997	1998	Jan 1999
Employment	373,404	395,445	407,051
-Production sector	260,581	271,205	280,772
-Service sector	112,823	124,240	126,279
Unemployment	201,981	240,100	259,020
Wait-listed	91,442	77,636	68,387
Unemployment ratio*	51%	50%	49%

* : Ratio of unemployed and wait-listed to sum of employed and unemployed.

Source: Federation Institute for Statistics.

The official rate of unemployment in the Federation is estimated at roughly 50% during 1997-98.

The special category of wait-listed workers are those workers who are registered as employed by their company and receive social benefits but who do not actually work. These workers should thus be treated as effectively being unemployed. Official employment and unemployment data are believed to inaccurately measure the true unemployment rate in the Federation economy. First, some registered as unemployed are working in the “shadow economy.” Second, some employees, particularly of small service enterprises, are neither registered as unemployed nor employed, as their employers have strong incentives to avoid paying social benefits on them. Third, there is no measure of the so-called “discouraged” labor force who are neither employed nor registered as unemployed. An alternative estimate of unemployment in the Federation is available from a survey conducted by the World Bank in the spring of 1997. This survey suggests that the unemployment rate then was roughly 33%. The survey also suggests that the size of the “discouraged” labor force (those who have simply stopped looking for work and are not registered as unemployed) is roughly 1/3 of the total labor force – a very high level.

Republika Srpska

Table 11 – RS Employment and Unemployment

	Dec 1996	Dec 1997	Sep.1998
Employment	193,574	224,267	-
Unemployment	121,904	142,524	142,913
Unemployment ratio*	39%	39%	-

* : Ratio of unemployed to sum of employed and unemployed.

Source: RS Institute for Statistics.

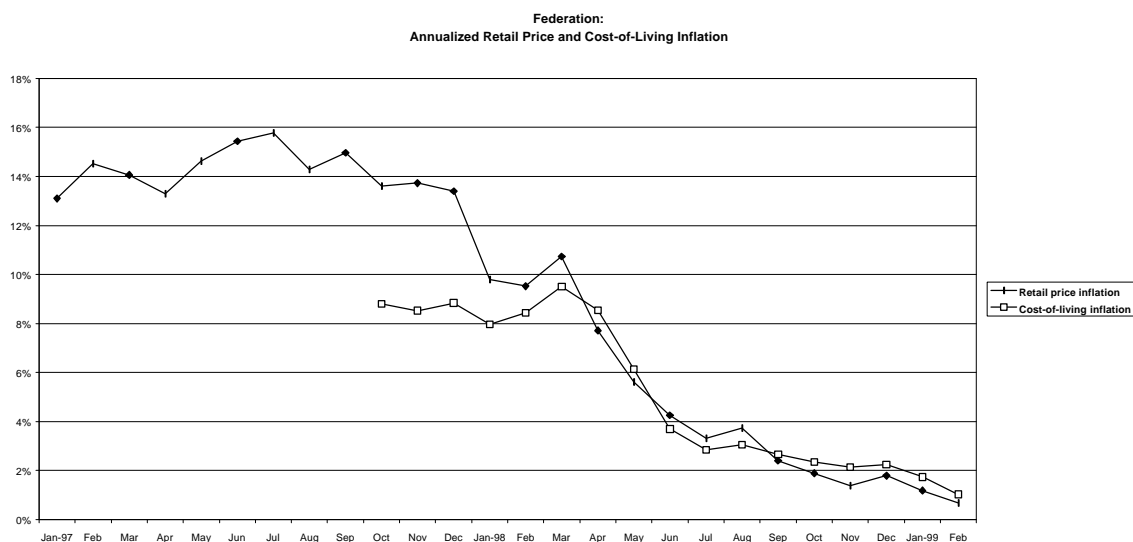
The official rate of unemployment in the RS is estimated at 39% in 1997. Note that no estimate of wait-listed workers is available for the RS. No estimate of employment in 1998 has yet been provided by the RS Institute for Statistics. The official unemployment rate in the RS is lower than that of the Federation. Several factors lead to this. First, the RS economy is more agricultural than the Federation economy. Second, unemployed workers in the RS have little incentive to register, as no benefits are paid and most people believe there is little chance that they will find a job through the employment agency.

V. Prices and Wages

Prices

Federation

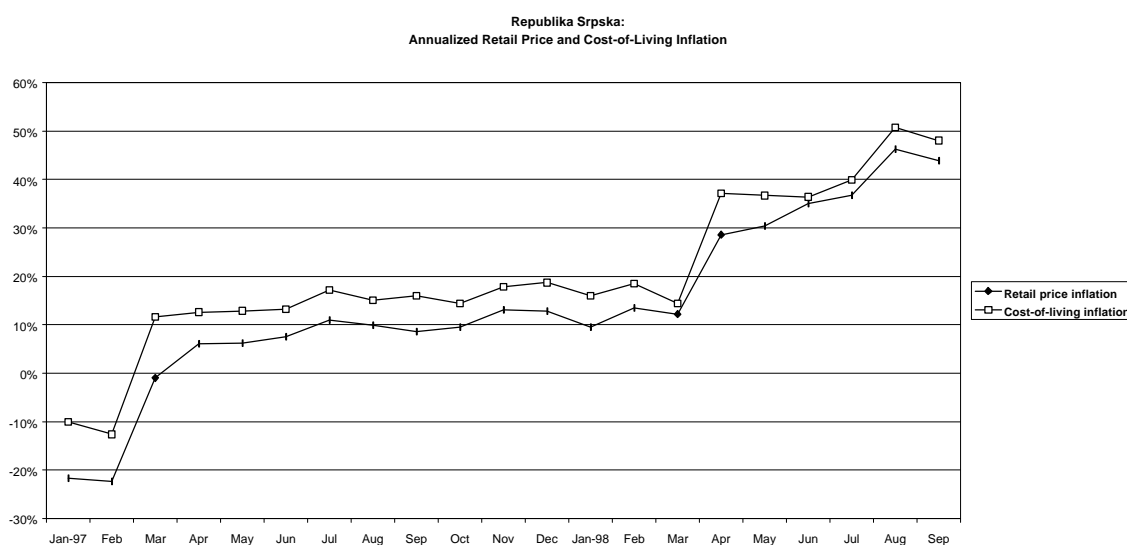
Price inflation in the Federation has fallen substantially in 1998. The figure below shows that the annualized inflation rate ran at over 12% in 1997 but fell through 1998 to reach a level of roughly 1% by February 1999. This is an impressive accomplishment and is due to policies implemented in 1995 that ended a hyperinflation and achieved remarkable price stability. The currency board monetary regime should ensure that price stability continues in the Federation.



Source: Federation Institute for Statistics

Republika Srpska

The price inflation picture is substantially different in the RS. The figure below shows that RS inflation ran at roughly 12% in 1997 but then accelerated in mid-year due to the devaluation of the official Yugoslav dinar-DM exchange rate in March 1998. In late 1998, annualized inflation was running as high as 50%. The RS thus suffers from a much greater degree of macroeconomic instability due to its reliance on the Yugoslav dinar as its primary currency. This instability has been exacerbated by the cutting of payments links with the Yugoslav payment bureau in late 1998, which led to a monetary shock (liquidity contraction). This shock may have had negative consequences for the real sector, although the degree to which the RS economy contracted as a result cannot be assessed until more recent RS economic data are available.



Source: RS Institute for Statistics

Wages

Federation

Table 12 – Federation Average Wage Data

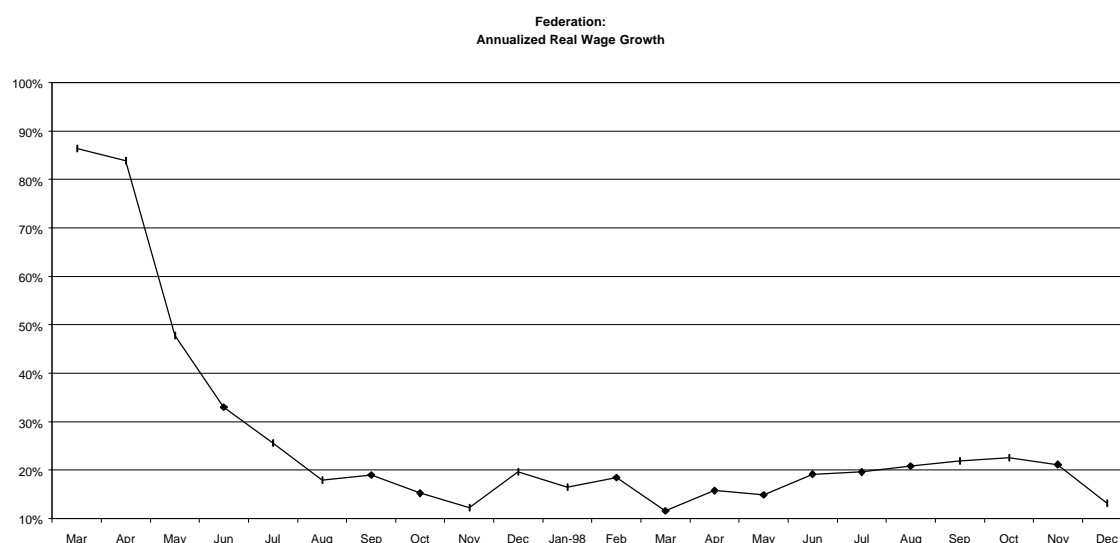
	Dec 94	Dec 95	Dec 96	Dec 97	Dec 98
Average net nominal wage in KM	21	60	236	308	357
Real wage (Dec 1994 = 100)	100	437	1605	1920	2172

Source: Federation Institute for Statistics

The average net nominal and real wage in the Federation has risen dramatically since the end of the war. The table and figure below show that growth in the real wage was very high in 1995, 1996, and early 1997, but then slowed in late 1997 and 1998. Annualized real wage growth has been running at roughly 20% in late 1998.

The Federation Government increased the minimum wage from KM 80 to KM 130 in mid-1998.

The evident goal of this action was to increase the value of contributions to the pension fund collected from wages. The government then issued a decree increasing the minimum wage from KM 130 to KM 200 in late 1998. If honored by employers, this dramatic increase in the minimum wage will have significant negative affects on the Federation labor market.



Source: Federation Institute for Statistics

Republika Srpska

Table 13 – RS Average Wage Data

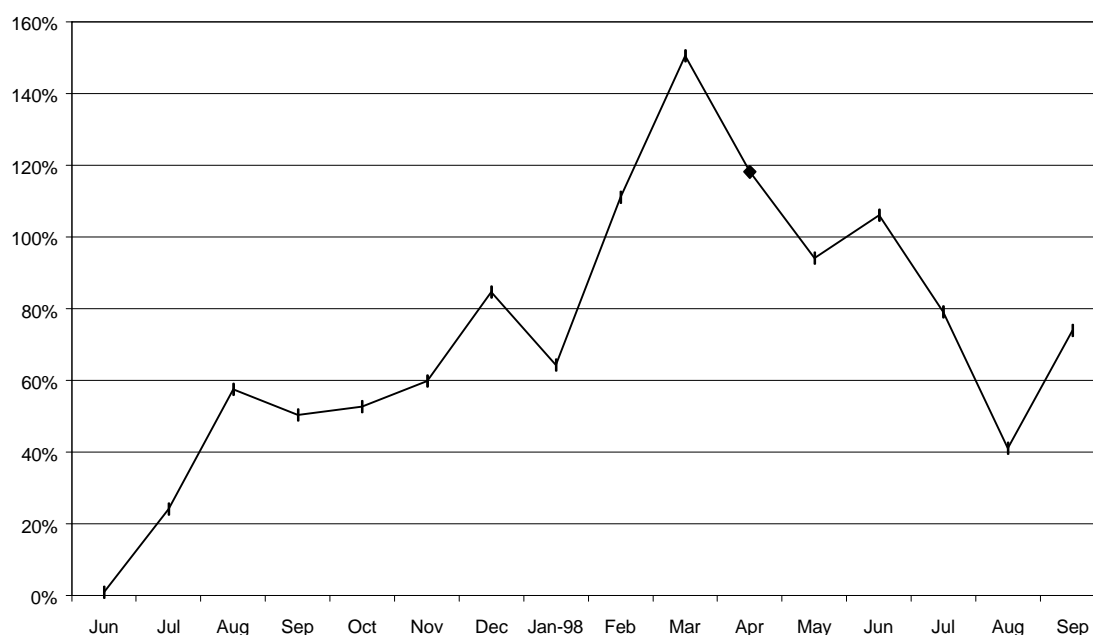
	Dec 94	Dec 95	Dec 96	Dec 97	Sep 98
Average net nominal wage in KM	46	23	67	112	163
Ratio to Federation wage	219%	38%	28%	36%	48%

Source: RS Institute for Statistics and Weekly Economic Bulletin (Belgrade)

The Yugoslav dinar-denominated average net nominal RS wage is converted into KMs using the parallel-market Yugoslav dinar-DM exchange rate that is reported in the Weekly Economic Bulletin. Due to gaps in time series on the parallel-market exchange rate and RS price inflation, an index of the real wage cannot be calculated. The figure below shows, however, that annualized real wage growth in the RS was very high in late 1997 and 1998. This is reflected in a rising ratio of the RS to the Federation average nominal wage: by September 1998, that ratio was almost 50%.¹ These wage data suggest that the gap between the level of economic well-being in the RS and the Federation narrowed in 1997 and 1998, undoubtedly partially due to increasing foreign aid to the RS.

¹ It must be noted that as the level of retail prices in the RS is generally lower than in the Federation, the RS wage has more purchasing power, and a ratio of RS-to-Federation wages adjusted for relative purchasing power would be higher than 50%.

**Republika Srpska:
Annualized Real Wage Growth**



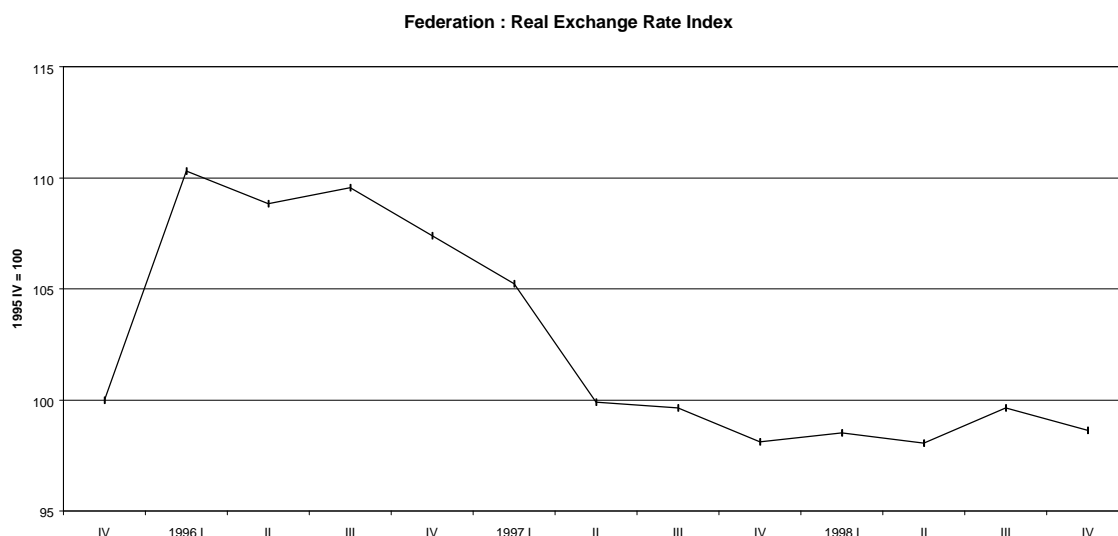
Exchange Rates

Federation Real Exchange Rate

The real exchange rate is one of the most important factors affecting the level of a country's imports, exports, and current account balance. If the real exchange rate depreciates (rises), then imports become less attractive to domestic citizens, and exports become more attractive to foreign buyers; if the real exchange rate appreciates (falls), then the reverse is true. Because the exchange rate of the BiH KM is fixed against the German DM, BiH monetary authorities cannot manipulate the nominal or real exchange rate. When governments give up such control, there is a danger that real appreciation of a country's currency can lead to an unsustainably large current-account deficit and balance-of-payments crisis. For a country with monetary and exchange rate regimes such as BiH's, it is important to closely monitor the real exchange rate and its affect on economic activity.

An index of the Federation real exchange rate is shown below.² The index depreciated shaprlly at the end of 1995 but then steadily appreciated and by mid-1997 had returned to its original end-1995 level. Since then, there has been little change. The Federation real exchange rate is likely to remain stable in the near future, because consumer price inflation is quite low and has reached levels comparable to those of the Federation's European trading partners. The major threat to macroeconomic equilibrium in the Federation is reduction in foreign aid flow.

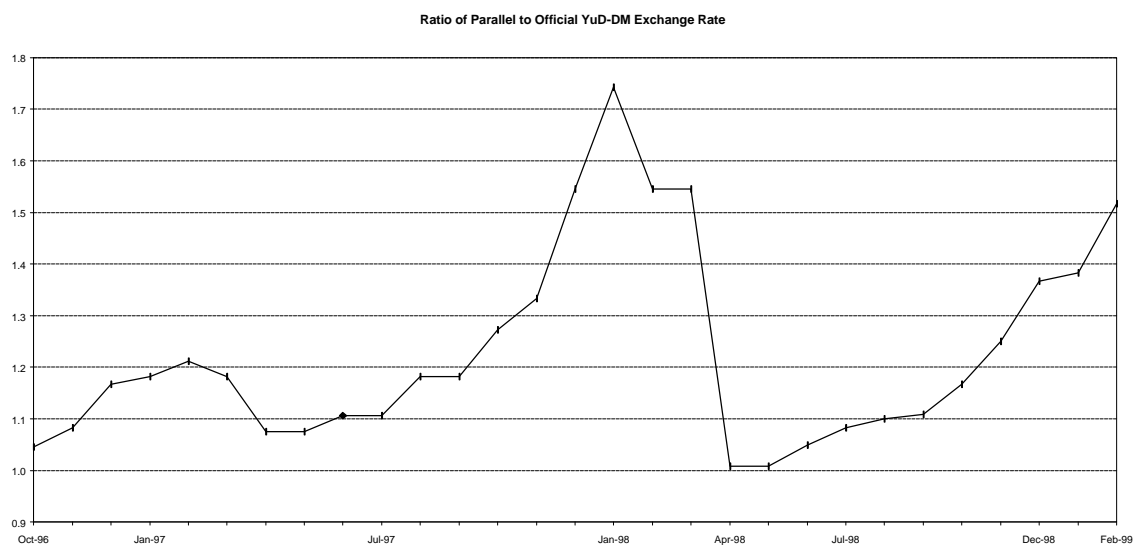
² It is not yet possible to calculate a real exchange rate index for the RS. No data is available on RS trade flows by partner country, and the dual official-parallel foreign exchange rates complicate calculation of a real exchange rate.



Source: Calculated from price inflation and exchange rate data from the IMF's International Financial Statistics and Federation Institute for Statistics.

Official and Parallel Yugoslav Dinar Exchange Rates

The primary currency of the RS, the Yugoslav dinar, has an official rate against the German DM that is set by the government of FRY. There are also active parallel markets on which the Yugoslav dinar is traded. The figure below shows the ratio of the parallel to the official exchange rate. Repressed inflationary pressures in FRY led the Yugoslav authorities to depreciate the official exchange rate sharply in April 1998, and the gap between the parallel and official rates was eliminated, at the cost of a one-month surge in price inflation in FRY and the RS. However, lax monetary and fiscal policies in FRY caused the gap to grow rapidly and by February 1999 it had almost attained the peak level reached in March 1998.



VI. Fiscal Indicators

State of BiH

Table 14 – BiH State Budget

(million KM)	1997	1998
Total expenditures	136	183
Operating costs	40	57
External debt service	96	126
Total revenues	136	183
Transfers from Entities	116	153
Own revenues	20	20
External aid	0	10
% of BiH GDP	2.3%	2.5%

Source: Government of BiH

State budgetary expenditures consist primarily of repayment of BiH external debt obligations. The large bulk of State revenues consist of transfers from Entity budgets. Problems experienced with these transfers in past years were resolved in 1998. Although the State budget grew by 35% in 1998 and will probably grow more in 1999, it still represents a very small share of BiH GDP. The State has yet to begin providing public services aside from external debt repayment.

All levels of BiH governments are prevented from financing budgets through issuing domestic debt. During the period of the Reconstruction Program, the BiH public sector will be highly dependent on external assistance and achieving economic growth. Changes in the level of external aid flows will exercise unusually high influence on BiH macroeconomic stability.

Federation

Actual Federation budgetary expenditures in 1998 were 15% below their planned level, due primarily to shortfalls in most areas of revenue collection. Spending categories that absorbed the bulk of the fiscal squeeze included military spending, payments to veterans, and external debt service. Expenditures were 15% of Federation GDP in 1998, and a budget deficit of 1% of GDP was financed with foreign credits.³ The 1999 budget is remarkably similar to the 1998 budget in level and structure. The budget deficit is anticipated to increase from roughly 1% to 2% of GDP; the increase is planned to be financed by an increase in foreign grants.

³ However, cantonal budgets are much larger than the Federation central budget: see below.

Table 15 – Federation Budget

(in million KM)	1998 budget	1998 actual	1999 budget		1998 budget	1998 actual	1999 budget
Total expenditures	917	780	920	Total revenues	822	718	820
Wages, contributions	89	77	83	Tax revenues	766	645	777
Goods and services	30	31	29	Excises	390	323	434
Military	343	276	368	Customs duties	376	312	330
Education and science	5	3	2	Nontax revenues	56	37	43
Subsidies to enterprises	30	36	24	Fees	25	10	11
Transfers to households and nonprofit orgs.	265	234	300	Fines	6	2	2
-Pension fund	0	13	9	Special charges	25	25	30
-Health	2	1	1	Capital revenues	0	36	0
-War invalids	257	209	271				
-Other	8	11	19	Budget balance	-95	-62	-100
Transfers to State	95	63	88	Financing			
-operating costs	20	21	20	Domestic	15	0	0
-debt service	75	42	68	Foreign grants	0	3	36
Transfers to cantons	7	7	3	Foreign credits	80	59	64
Other expenses	4	3	2	% of Fed. GDP:			
Capital expenditures	36	32	13	Expenditures	18%	15%	15%*
Govt. reserves	12	17	7	Revenues	16%	13%	13%*
				Budget balance	2%	1%	2%*

* : Under assumption that nominal GDP growth will be 15% in 1999.

Source: Federation Government

Republika Srpska

Actual RS budgetary expenditures in 1998 were 11% higher than their planned level, in spite of lower-than-expected levels of tax revenues and foreign financing. The higher spending level was made possible by the collection of unexpectedly large amounts of fees, “special,” and “other” revenues. This development bears careful watching: such sources of revenues may be raised in a discretionary and unexpected manner and constitute highly undesirable fiscal policy.

RS budgetary expenditures were 27% of RS GDP in 1998, and the RS central budget deficit was 4% of GDP. The RS was significantly more dependent than the Federation on foreign grants and credits in 1998. The recent dramatic events in the region are likely to have major impacts on RS financial flows and economic activity in 1999. Disruption of trade with FRY, which began with the severing of relations between the RS and FRY payment bureaus in November 1998, will be exacerbated, and the international community may be less willing to finance RS internal imbalances. These shocks will have negative impacts on the level of RS GDP and tax collection and will result in a fiscal squeeze even if the international community finances the RS budget as anticipated.

Table 16 – Republika Srpska Budget

(in million KM)	1998 budget	1998 actual	1999 budget		1998 budget	1998 actual	1999 budget
Total expenditures	468	518	637	Total revenues	365	442	574
Wages, contributions	107	143	206	Tax revenues	347	330	413
Goods and services	28	80	91	Excises	19	67	94
Military	86	58	85	Customs duties	89	95	142
Intelligence-security	0	0	6	RS Army tax	- ^a	27	5
Education and science	0	1	1	Sales tax	140	83	103
Subsidies to economy	14	15	31	Direct taxes	87	58	69
Commodity reserves	10	12	14	Other tax revs.	12	0	0
Transfers to households and nonprofit orgs.	62	71	78	Fees	16	50	56
-Social institutions	0	3	3	Fines	2	3	5
-Veterans and invalids	51	55	56	Other revs.	-	44	49
-Other	11	13	19	Special revs. ^b	-	15	51
Transfers to State	60	70	60	Budget balance	-103	-76	-65
-operating costs	10	10	10	Financing:			
-debt service	50	60	50	Foreign grants And credits	103	76	65
Transfers to municipal.	12	0	1				
“Additional resources for public funds”	51 ^c	38	30	% of RS GDP:			
Other expenses	13	1	1	Expenditures	24%	27%	28% ^d
Capital expenditures	0	0	19	Revenues	19%	23%	26% ^d
Budget reserves	25	30	14	Budget balance	5%	4%	3% ^d

a: Included in “other tax revenues” for the 1998 budget.

b: Special revenues include tax on railways, fees for water, forestry, health care, and certain other services, and own-source revenues of RS customs administration and financial police. No figure is available for 1998 budget.

c: Budgeted expenditure on the “Social Fund.”

d: Under assumption that nominal GDP growth will be 15% in 1999.

Source: RS Government

Consolidated Entity Budgets

The Federation and RS budgets do not include expenditures and revenues of the municipalities and, in the Federation, the cantons. Canton budgets in particular are very large (in 1998, they were 60% bigger than the Federation central budget), mainly because cantons are responsible for health and education services. Municipalities in both Entities also have own sources of revenue and expenditure responsibilities.

Table 17 shows the Federation central and consolidated cantonal budgets, and the total of these two (the expenditure and revenue categories used in table 17 differ somewhat from table 15). Central and cantonal budgets together were 38% of Federation GDP in 1998. Municipality own-source revenues were KM 166 million in 1998, and consolidated Federation budget revenues of KM 2,218 million were 41% of Federation GDP.

No municipality budget data is yet available for the RS but probably constitutes an important portion of overall RS revenues and expenditures.

Table 17 – Consolidated Federation Budget in 1998

(in million KM)	Fed.	Cantons	Total		Fed.	Cantons	Total
Total expenditures	778	1,250	2,028	Total revenues	778	1,274	2,052
Current expenditures	414	265	679	Tax revenues	645	863	1507
Employee expenses	137	175	312	Payroll tax	0	173	173
Military	276	90	366	Income taxes	10	67	77
Capital expenditures	109	151	260	Real estate tax	0	4	4
Equipment purchases	33	36	69	Customs taxes	312	0	312
Inter-govt. transfers	30	103	133	Sales tax	323	618	941
Investment, subsidies	47	12	59	Nontax revs.	12	308	320
Social services	222	672	894	Fines	- ^a	35	35
Education	0	318	318	Special revs.	12	52	64
Science and culture	0	31	31	Health insurance	0	201	201
Social and child services	0	37	37	Social services ^b	0	21	21
Health	0	176	176	Capital income	0	42	42
Veterans' benefits	209	67	276	Other income ^c	121	61	182
Other services	13	42	55				
Repayment of credits	8	1	9				
Other expenditures	26	161	187				
				% of 1998 GDP:	15%	24%	38%

a :Included in "other income."

b: Payments for education, culture, and sport.

c : Including foreign grants and credits.

Source: Federation Ministry of Finance.

VII. Monetary and Financial Sectors

Monetary Sector

Table 18 – BiH Monetary Data

Money Stocks					
	Dec 94	Dec 95	Dec 96	Dec 97	Oct 98
Broad Money (M2)	363	395	776	1116	1374
Money (M1)	11	51	188	252	245
Currency outside banks	2	28	97	113	114
Demand deposits	9	23	91	139	131
-held by households	1	2	3	5	
Quasi-Money	352	344	588	864	1129
Demand deposits in foreign currency	232	293	466	533	644
-held by households	52	34	63	126	
Savings deposits in domestic currency	1	4	7	10	10
-held by households	1	1	0	1	
Savings deposits in foreign currency	119	47	115	321	475
-held by households	34	13	27	115	
Currency-deposit ratio:					
Including foreign-currency demand deposits	0.01	0.09	0.17	0.17	0.15
Excluding foreign-currency demand deposits	0.22	1.22	1.07	0.81	0.87

Financial Depth and Money Velocity				
	1995	1996	1997	1998
Financial Depth*				
Ratio of M1 to GDP	2%	4%	4%	3%
Ratio of Quasi-Money to GDP	12%	14%	15%	16%
Ratio of M2 to GDP	14%	19%	19%	19%
Money Velocity				
Including foreign-currency demand deposits	9.8	8.4	8.1	8.7
Excluding foreign-currency demand deposits	92.7	35.1	26.4	29.3

* : Ratio of end-December monetary stock (end-October for 1998) to GDP value for the year.

Source: Central Bank of BiH and World Bank Economic Brief for BiH (Nov. 18 1998)

BiH monetary authority is now vested fully in the Central Bank of BiH (CBBH), which issues the domestic currency of BiH, the konvertibilna marka (KM). The CBBH runs a currency board, and the KM is fully backed by German DM reserves and can be exchanged on demand for the DM at a fixed exchange rate of 1-to-1. Liquidation of the old National Bank of BiH has removed any possibility of CBBH reserves not fully covering KM emissions. Although the KM is the legal tender currency of BiH and must be accepted by law as a payment medium, other currencies are not prohibited from being used in BiH, and the DM, Croatian kuna, and Yugoslav dinar continue to circulate. A currency board is the most stringent monetary regime that a country can choose and removes almost all ability of BiH governments to make monetary policy. The CBBH can still influence the size of the stock of money by changing deposit reserve requirements, but it cannot directly set interest rates or conduct open-market monetary operations.

The Federation economy has been characterized by a high degree of monetary and price stability since the end of the war. Prior to the establishment of the CBBH, the Bosnian dinar was backed by DM reserves and thus enjoyed the same stability as the KM, and the kuna has also generally been stable since 1995. Although the Federation experienced hyperinflation in 1992 and 1993, macroeconomic stabilization took place during the war in early 1995, and there was actually price deflation in that year. Achieving macroeconomic stability has of course been aided enormously by the large foreign aid inflows of the Reconstruction Project. Without these aid inflows, the BiH economy could not run massive current account deficits and simultaneously maintain macroeconomic stability. The BiH economy will thus be highly sensitive to changes in the level of foreign aid, and when that aid begins to fall, the economy will experience real pressure. Falls in foreign aid will translate directly into contractions in imports and (under a currency board regime) the money stock. The Federation government will then have to take steps to increase the level of exports and reduce demand for imports in order to mitigate large negative shocks to economy.

The RS economy has been characterized by less stability than the Federation economy due to its continued reliance on the more unstable Yugoslav dinar currency. Inflation has been significantly higher in the RS than the Federation and until 1998, the RS enjoyed much less foreign aid inflows as a percentage of national income. Recent steps to strengthen use of the KM in the RS economy, including requiring tax payments to be made in KM and making state expenditures in KM, will help reduce macro instability.

The levels of financial depth and money velocity in the BiH economy have remained more or less constant during 1996-98. The level of financial depth as measured by the ratio of M2 to GDP is equal to 19% and is quite low by both OECD and central European transition economy standards, even after taking into account that BiH is a relatively poor economy. The poor state of the commercial banking sector and lack of confidence in it on the public's part have resulted in a very low deposit base and a preference to store wealth in the form of foreign currency and offshore deposits. State banks are burdened with bad loans that resulted from the war and bad management practices. Many private banks are undercapitalized and have also engaged in poor management practices. Implementation of new banking regulations and privatization of state banks will result initially in the closing of private- and public-sector banks, and this may temporarily reduce confidence even further as the public becomes aware of the true degree of financial insolvency. After this initial shock, however, and with reform of the payments environment and liquidation of the BiH payment bureaus, the banking sector should strengthen substantially, and the deposit base and availability of credit should increase significantly. The need for a healthier BiH banking sector in order to facilitate economic recovery and growth cannot be overstated.

Interest Rates

Table 19 – BiH Bank Interest Rates as of September 1998

	Short-term loans			Demand deposits			Average spread
	Min. ^a	Avg. ^a	Max. ^a	Min. ^a	Avg. ^a	Max. ^a	
Fed.-Bosniak	19.0%	25.7%	32.3%	3.2%	3.6%	4.0%	22.1%
-coeff. of var. ^b		0.28			0.65		
Fed.-Croat	13.5%	17.5%	21.5%	2.7%	4.1%	5.6%	13.4%
-coeff. of var. ^b		0.19			0.75		
RS	50.4%	66.0%	81.6%	6.1%	12.7%	19.3%	53.3%
-coeff. of var. ^b		0.51			1.25		

a : Simple arithmetic averages of posted rates; not weighted by loan volumes.

b : Coefficient of variation is the ratio of the standard deviation to the arithmetic mean of a variable.

Table 20 – Two International Credit Programs

	Interest rate	Loan size	Collateral required?
USAID BF	9.3% ^a	DM 200,000-1,000,000 ^b	Yes
Swiss (KfW)	12%-16% ^c	DM 5,000-100,000	Yes

a : LIBOR interest rate plus 4%; value shown is the 12-month LIBOR rate on April 1 plus 4%.

b: Loans made in quantities down to DM 30,000 under special conditions.

c : Up to 16% on loans less than DM 50,000; up to 12% on loans between DM 50,001-100,000.

Source: USAID, Swiss Agency for Development and Cooperation, World Bank.

In September 1998, the average interest rate charged on short-term loans was roughly 26% by Federation-Bosniak banks, 18% by Federation-Croat banks, and 66% by RS banks. Rates on demand deposits were much less, averaging around 4% in the Federation and 13% in the RS. Real interest rates on deposits were negative in both Entities, so that BiH financial markets are characterized by financial repression⁴. The spread between loan and deposit rates was 22% and 13% for Federation Bosniak and Croat banks respectively and a massive 53% for RS banks. These spreads are quite large and suggest that risk premia on commercial bank lending are very high and/or that there is a low degree of competition in BiH banking markets. Interest rates on demand deposits are much more variable than rates on short-term loans, and variability in both deposit and loan rates are much higher in the RS than the Federation.

The weak condition of the domestic BiH banking sector suggests that few short-term (and almost no long-term) loans are actually being made, and that the risk of bank insolvency deters many depositors from placing funds in banks. It is thus not clear how relevant posted loan rates actually are for the economy. Most long-term credit to the BiH economy for productive purposes is being provided by international credit programs. Table 20 shows that interest rates charged by these programs are significantly less than rates posted by BiH banks. It is not clear to what extent this difference can be regarded as a subsidy to domestic firms, because long-term loans made by domestic banks are almost non-existent, and the international loan programs may be better-run, select better clients, and impose tougher non-price criteria than domestic banks.

⁴ The real interest rate equals approximately the nominal interest rate minus the price inflation rate.

VIII. Privatization

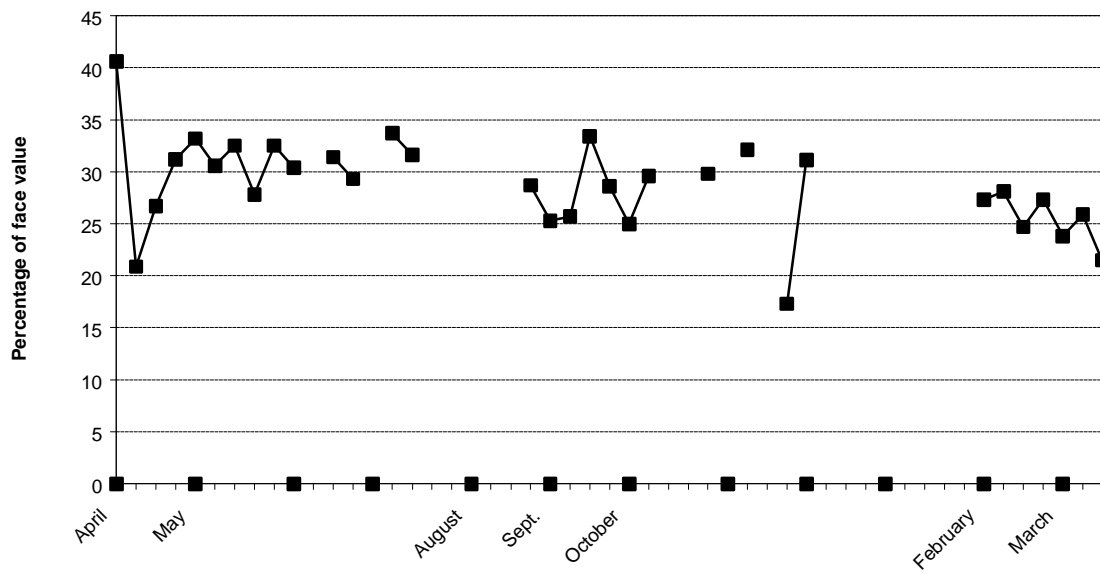
Trade in Privatization Claims

The only non-bank financial assets that are being actively traded in BiH at present are claims that can be used to bid on assets in the Federation privatization process. These claims include soldiers' paybooks that were acquired by veterans of the war who have not yet been paid, and frozen foreign currency accounts. Sellers of soldiers' paybooks or frozen currency accounts place advertisements in newspapers, in particular the commercial weekly "Oglasi" published in Sarajevo. Soldiers' paybooks account for the vast majority of ads run in Oglasi. The ads usually quote the face value of the paybook and often quote an asking price for the paybook. The first graph below shows the average percentage of face-value asked by sellers of paybooks during April 1998-March 1999, and the second graph shows the total number of paybook advertisements appearing in Oglasi. (There are gaps in the data for weeks when Oglasi was not obtained).

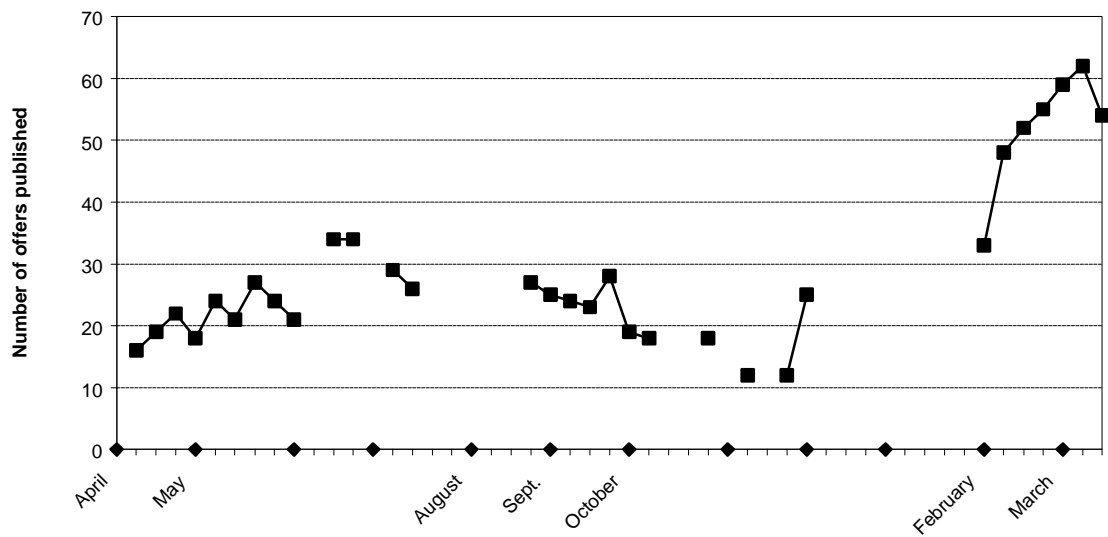
The average asking price for paybooks hovered at around 30% of face-value until early 1999, when it then declined to just above 20%. The total number of paybooks advertised in Oglasi was also fairly stable at roughly 20 per week until early 1999, when the number of ads placed in the paper rose dramatically. Evidently, the supply of paybooks has increased sharply in early 1999, and this has somewhat depressed their average market price, suggesting that demand has not fully kept pace with supply. However, even though price has fallen somewhat, the big increase in the number of ads in Oglasi suggest that there is now much greater interest on the part of buyers in acquiring paybooks to use in the small-scale and mass privatization programs.

It should be kept in mind that this analysis is based on a small sample of newspaper advertisements made only in Sarajevo. Although one would expect that much of the trade in privatization claims would be taking place in Sarajevo, claims are also being traded in other Federation cities, and the degree to which these markets are integrated is unknown. Also, the advertised price for the soldiers' paybooks is the seller's asking price and is an upper bound on the actual transactions price, for which no data is available. Although trends in the asking price are presumably correlated with trends in the transactions price, the actual discount at which these paybooks are trading is yet unknown.

Average Percentage of Face-Value Asked By Sellers in Sarajevo



Total Number of Offers Published in "Oglasi"



Source: Oglasi weekly newspaper.

Ownership Status and Productivity in the Retail Trade Sector

Although much of the BiH economy remains in state hands, the private sector has grown since the end of the war, particularly in the service sector. Some statistical evidence on the performance of the private versus state-owned sectors is already available for the retail trade sector. The tables below show data on employment and labor productivity for retail trade shops for three different ownership categories (social, mixed, and private ownership). These data reveal two very interesting facts. First, privately-owned shops have labor productivity levels generally five times higher than for socially-owned or mixed-ownership shops. Second, employment and productivity growth in the privately-owned retail-trade sector has been dramatically higher from late 1997 to late 1998 than growth for the other ownership categories. Although restricted to only one sector of the economy, this evidence is suggestive of the benefits that increasing the size of the private economy in BiH could bring.

Table 21 - Federation Retail Trade Sector

	Socially-owned		Mixed ownership		Private property	
	Employment	Productivity	Employment	Productivity	Employment	Productivity
1997 III	1194	9724	5353	14607	716	50339
IV	1281	9620	6260	21700	992	66206
1998 I	1479	9840	5979	8694	1553	48246
II	1611	8919	6024	10323	1675	72999
III	1633	9543	6041	10832	1711	71503
Growth, 1997 III - 1998 III	37%	-2%	13%	-26%	139%	42%

Employment: number employed in retail trade shops

Productivity: KM of retail trade turnover per employee

Source: Federation Institute for Statistics

	Private-ownership productivity as % of:	
	Socially-owned productivity	Mixed-ownership productivity
1997 III	518%	345%
IV	688%	305%
1998 I	490%	555%
II	818%	707%
III	749%	660%
Average	653%	514%

APPENDIX A : THE FEDERATION AND RS ECONOMIC ACTIVITY INDICATORS

Neither the Federation nor RS Statistics Institute produces monthly or quarterly national income data. This deficit has caused analysts to rely primarily on the industrial production index to evaluate trends in the monthly growth of the BiH economies. Using industrial production for this purpose, however, is highly unsatisfactory. Industrial production accounted for only 29% and 22% of national income in 1997 in the Federation and RS respectively. The service sector accounts for a large portion of both economies.⁵ The need for an indicator that encompasses more than just the industrial sector is obvious.

It is possible to make use of data on various sectors provided by the entities' monthly statistical bulletins to calculate monthly and quarterly growth in an "economic activity" indicator. The activity indicator aggregates together growth rates of indicators for industry, agriculture, forestry, construction, transport and communication, domestic trade (wholesale and retail trade), hotels and restaurants, and tourism in the case of the Federation. In the case of the RS, no indicator for agriculture is available. The tables below summarize the indicators that are used, how their growth rate in real terms is calculated, and the frequency at which they are available. Growth rates for the individual indicators are aggregated using GDP sectoral weights: an average is taken of sectoral weights in the base year and the current year.

It should be noted that the economic activity indicator is *not* a proxy for national income. National income is a measure of value-added and does not include the value of intermediate inputs into production. The economic activity indicator is a proxy for the gross output of the economy and includes the value of intermediate inputs. If the ratio of gross output to national income is stable, then growth in gross output will serve as a good proxy for growth in national income. It is also true that the indicator for construction, effective hours worked, is a proxy for the gross output of the construction sector. Several sectors of both the Federation and RS economies are not included in the activity indicator, in particular public services (health, education, public administration). Finally, note that no indicator is available for the RS agricultural sector on either a monthly or quarterly basis. This means that for the RS monthly activity indicator, industry has a very large weight.

The main reason for using the economic activity indicator is that it provides a broader picture of what is happening in the economy than the industrial production index only. The following table summarizes how much of the variation in the monthly and quarterly economic activity indicators can be explained by variation in industrial production. For the Federation, change in industrial production can explain only roughly half of the variance in activity indicator growth at both monthly and quarterly frequencies. For the RS, most of the variance in monthly activity indicator growth can be explained by industrial production growth: the RS has no agricultural or trade indicators at a monthly frequency, and industry therefore has a very large weight in the activity indicator. At the quarterly frequency, however, only roughly half of the variance in the activity indicator can be explained by industrial production, suggesting that the activity indicator does add substantial information.

⁵ Wholesale and retail trade also appear to be significantly undermeasured in the RS, so the share of services in the RS economy would probably increase substantially if trade was properly measured.

It is unfortunate that the Entity Institutes for Statistics continue to collect and process data entirely on the basis of their pre-war approaches. There is a real need for a high-frequency indicator on gross output and national income. Until the Statistics Institutes decide to improve their operations and introduce such statistics, the economic activity indicator will have to do.

Proportion of variance in economic activity indicator growth explained by variance in industrial production growth: ^a		
	Monthly	Quarterly
Federation	49%	48%
RS	78%	46%

a : the R^2 statistic from linearly regressing activity indicator growth on industrial production growth.

FEDERATION ACTIVITY INDICATOR			
Sector	Indicator	Methodology	Frequency*
Industry	Industrial production index	Simple growth rate	M & Q
Agriculture	Agricultural products sold in farmers' markets; agricultural products sold by producers	Nominal sales data deflated with retail price index for agricultural products	M & Q
Forestry	Production of sawn timber (cubic meters)	Simple growth rate	M & Q
Construction	Effective hours worked by laborers	Simple growth rate	M & Q
Transport	Rail and road freight haulage (ton-kilo.); road passenger traffic (passenger-kilo.): passengers transported in urban areas	Indicators aggregated using 30% weights for road freight and passengers, and 20% for urban transport and rail freight.	M & Q
Communications	Letters delivered; telephone signal impulses processed	Growth rates aggregated using 50% weights	M & Q
Domestic trade	Retail and wholesale trade turnover	Nominal sales data deflated with retail price index	Q only
Hotels and restaurants	Hotel and restaurant sales	Nominal sales data deflated with retail price index	Q only

REPUBLIKA SRPSKA ACTIVITY INDICATOR			
Sector	Indicator	Methodology	Frequency*
Industry	Industrial production index	Simple growth rate	M & Q
Forestry	Production of sawn timber (cubic meters)	Simple growth rate	M & Q
Construction	Effective hours worked by laborers	Simple growth rate	M & Q
Transport	Rail and road freight haulage (# of tons); road passenger traffic (# of passengers): passengers transported in urban areas	Indicators aggregated using 30% weights for road freight and passengers, and 20% for urban transport and rail freight.	M & Q
Communications	Letters delivered; telephone signal impulses processed	Growth rates aggregated using 50% weights	M & Q
Domestic trade	Retail and wholesale trade turnover	Nominal sales data deflated with retail price index	Q only
Hotels and restaurants	Hotel and restaurant sales	Nominal sales data deflated with retail price index	Q only

APPENDIX B : HISTORICAL BiH INFLATION AND NATIONAL INCOME DATA

Table B1 - Retail Price Inflation in BiH and the Federation

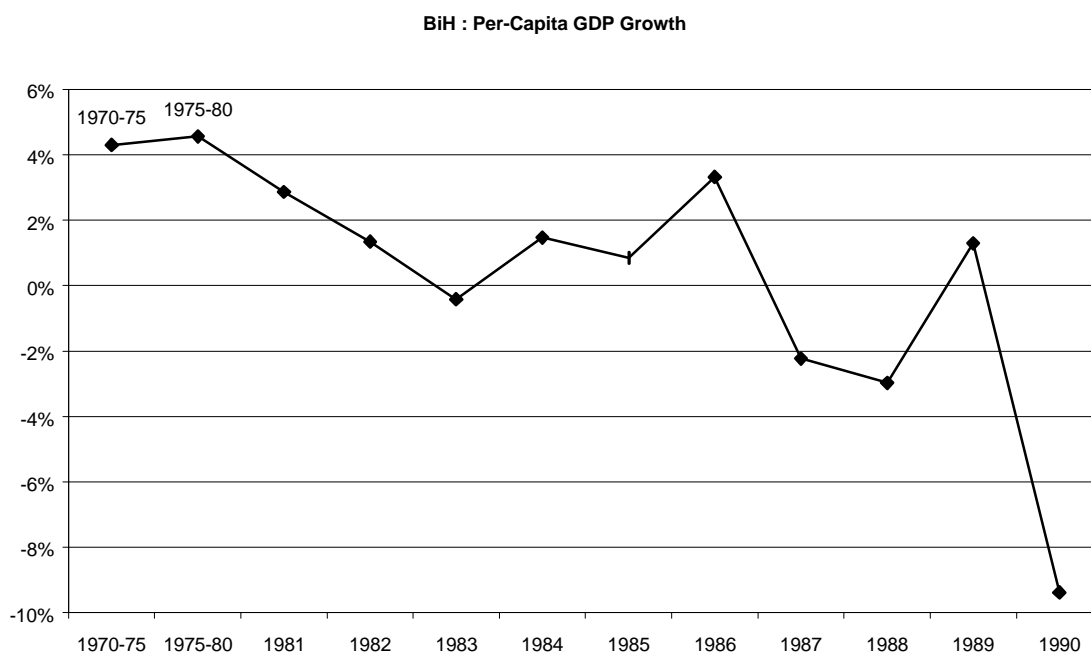
	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
BiH	30%	40%	54%	78%	86%	117%	197%	1268%	594%	105%

	1992	1993	1994	1995	1996	1997	1998
Federation	73209%	44069%	780%	-17%	-20%	11%	6%

Source: 1991 BiH Statistical Yearbook; Federation Institutes for Statistics.

The tables above give a history of retail price inflation in BiH and the Federation during 1982-98. The effects of growing tension in ex-Yugoslavia on the economy can be seen in the accelerating inflation of the 1980's. By 1989, the economy was sinking into hyperinflation, although inflation was actually brought down dramatically in two years prior to the war. During 1992 and 1993, the Federation was in the grip of full-blown hyperinflation. The economy began to stabilize in 1994, and in early 1995, price deflation set in, even though the war had not yet ended. Deflation continued through 1996, and moderate inflation in 1997 fell to a low 6% in 1998.

The figure below shows per-capita national income growth in BiH during 1970-1990. Average per-capita income growth in the 1970's ran at a relatively high rate above 4%. The tensions of the post-Tito era as well as the shocks suffered by developing countries in the early 1980's led to a decline in the rate of income growth, and in the late 1980's the BiH economy was actually contracting. Economic decline was profound in 1990, when BiH per-capita income fell by almost 10%.



Economic Policy - An Overview

- X The new currency KM was introduced in the State in July. The deadline for the conversion of Bosnian dinars into the new currency was July 7 and around 90% of Bosnian dinars were exchanged. The remainder, worth around \$7.3 million, was declared damaged or missing and has not been converted at all. The first coins of Bosnia's new convertible currency are expected to come into circulation in November from Britain, where they are being produced by the Royal Mint. As legal tender, the KM have to be accepted in all transactions, but businesses and individuals are not obliged to use it, so the kuna, DM and Yugoslav dinar remained important media of exchange.
- X Although the Liquidation Plan of the Narodna banka was adopted by the Bosnian Presidency and Mr. William Dudley, who prepared the Liquidation Plan and has been reappointed to implement it, the instructions on liquidation were not followed. The Payments Bureau (ZPP) continued to avoid ending financial operations on accounts with the National Bank and freezing illiquid deposit balances.
- X The Board of Directors of the International Monetary Fund approved the stand-by arrangement on May 29, 1998 after BiH met the IMF conditionalities. This one-year loan, designed to support the governments 1998/99 reform program, is worth \$81million with disbursement scheduled in two tranches. The first tranche of \$32 million was immediately available, but it could be blocked if there is any back-tracking on reform. The IMF mission visited the state in August 1998 in order to make the first review under the stand-by agreement.
- X Following the signing of the IMF stand-by agreement, the World Bank approved a \$63 million public finance structural adjustment credit designed to help reform public finances and improve external debt management. The loan is disbursed as an initial tranche of \$33 million with the remaining \$30 million to be released after a review of the adjustment program.
- X After a first negotiation session on July 23 and 24, 1998, the Paris Club met again on October 28, 1998 and reached an agreement for a 67% write-off of outstanding debt. Although not all countries are going to write-off BiH's external debt in the same manner, using the same method, the net present value approach guarantees the 67% write-off. BiH has to cut a deal with each of the creditor countries before the end of May 99. The Paris agreement opened the way for the second tranche of the IMF stand-by, negotiate an ESAF (pending the liquidation of the Narodna Banka), and go ahead for the World Bank Structural Adjustment credit.

- X The state budgets and entity budgets were adopted in April 1998. As the state does not have any large independent source of revenues (only consular fees), Dayton stipulates that the entities provide sufficient funds to the state budget to fund the administrative costs of the central institutions and to service external debt. The automatic mechanisms for transferring resources from the entities to the state budget began to function in July and August, but not always within the agreed timetable. The utilization of resources has become a problem because some of the Ministries have not yet opened accounts within the recently established budget system. In many cases, also, parallel accounts are used. In addition, responsibilities and duties are not clearly defined, so there is a lack of efficiency in the execution and monitoring of the state budget.
- X An acceptable Federation External Debt Law was adopted by the government and passed both Houses of Parliament in September 1998. In the RS, the draft law has been prepared.
- X The Council of Ministers adopted the OHR-sponsored draft State Privatization Law on May 28, 1998. The law was passed by the House of Representatives but not by the House of Peoples. The High Representative imposed the law on July 23, 1998. The legal framework for privatization was passed in both entities, as well as the capital market laws.
- X The Customs Tariff Law of BiH, as passed by the Council of Ministers and Parliament, sets out 4 different tariff rates to be applied throughout the country. The Law was published in the Official Gazette on February 11, 1998 and came into force on March 13. The Federation Government announced the repeal of the decree on special import duties. The decision became effective on May 16, 1998. However, both entities continue to collect illegal import duties and give preferential treatment to goods imported from Croatia and Yugoslavia (in the relevant entities).
- X The Customs Policy Law was adopted by the Council of Ministers and passed both houses of Parliament on the 2nd and 3rd of September. This law is an important step in completing the economic framework of the State.